

ADDITIONS TO THE REVISED CATALOGUE OF OHIO VASCULAR PLANTS. XIII¹

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In spite of the efforts of the many conscientious collectors who through the years have attempted to build for us in the State Herbarium a permanent record of Ohio's vegetation, some counties are poorly represented. Carroll County, located just south of the glacial boundary in the rugged plateau section of the state, was an outstanding example. Last summer the Ohio Conservation Laboratory was held at Camp Muskingum on Leesville Lake in that county. Students and staff members of the school collected representative specimens of the vegetation in that area to be deposited in the herbarium at the Laboratory and in the State Herbarium. The work will continue this summer.

Three particularly interesting contributions came to the State Herbarium this year. The first two were collected hundreds of miles outside their usually accepted ranges: *Berchemia scandens* the Rattan-vine and *Carex caroliniana* the Carolina Sedge. The third, *Asplenium trudelli* Trudell's Spleenwort, is a hybrid between *Asplenium montanum* the Mountain Spleenwort and *Asplenium pinnatifidum* the Pinnatifid Spleenwort.

The numerous other valuable specimens and collections which have been received during the year are being preserved and will be identified and reported as rapidly as time and assistance permit. We are indeed happy that the hobby of collecting has not been a war casualty among Ohio amateurs.

6. *Botrychium dissectum* Spreng. Cutleaf Grape-fern. Camp Muskingum, Carroll Co. Adele Konopka.
8. *Osmunda regalis* L. Royal-fern. Camp Muskingum, Carroll Co. Clyde H. Jones.
10. *Osmunda cinnamomea* L. Cinnamon-fern. Camp Muskingum, Carroll Co. Clyde H. Jones.
11. *Polypodium virginianum* L. Virginia Polypody. Camp Muskingum, Carroll Co. Adele Konopka.
- 22.1. *Asplenium trudelli* Wherry. Trudell's Spleenwort. (*A. pinnatifidum* x *A. montanum*). Fairfield and Pike Co. Floyd Bartley and Leslie Pontius.
32. *Camptosorus rhizophyllus* (L.) Link. Walking-fern. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
38. *Dryopteris marginalis* (L.) Gr. Marginal Shield-fern. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
39. *Dryopteris intermedia* (Muhl.) Gr. American Shield-fern. Camp Muskingum, Carroll Co. Arthur R. Harper.
45. *Cystopteris fragilis* (L.) Bernh. Fragile Bladder-fern. Camp Muskingum, Carroll Co. Adele Konopka.
46. *Woodsia obtusa* (Spreng.) Torr. Blunt-lobed Woodsia. Camp Muskingum, Carroll Co. Clyde H. Jones.
54. *Equisetum praealtum* Raf. Great Scouring-rush. Camp Muskingum, Carroll Co. Adele Konopka.
61. *Equisetum arvense* L. Field Horsetail. Camp Muskingum, Carroll Co. Adele Konopka.
65. *Lycopodium clavatum* L. Common Club-moss. Camp Indianola, Fairfield Co. Gene Rea.
- 82.1. *Sagittaria longirostra* (Michx.) J. G. Sm. Long-beaked Arrow-head. Hocking Co. Floyd Bartley and Leslie Pontius.
119. *Philotria canadensis* (Mx.) Britt. Common Water-weed. Camp Muskingum, Carroll Co. Arthur R. Harper.
- 122.1. *Sparganium americanum* Nutt. Nuttall's Bur-reed. Hocking Co. Floyd Bartley and Leslie Pontius.

¹Papers from the Department of Botany, The Ohio State University, No. 486.

131. *Arisaema dracontium* (L.) Schott. Green-dragon. Camp Muskingum, Carroll Co. Arthur R. Harper.
140. *Scirpus lineatus* Mx. Reddish Bulrush. Malvern, Carroll Co. Clyde H. Jones.
144. *Scirpus polyphyllus* Vahl. Leafy Bulrush. Camp Muskingum, Carroll Co. Arthur R. Harper. Wayne Co. L. S. Hopkins.
146. *Scirpus validus* Vahl. Great Bulrush. Wayne and Ashland Co. L. S. Hopkins. Camp Muskingum, Carroll Co. Arthur R. Harper.
148. *Scirpus americanus* Pers. Chair-maker's Clubrush. Ashland Co. L. S. Hopkins.
156. *Eleocharis quadrangulata* (Mx.) R. & S. Four-angled Spike-rush. Ashland Co. L. S. Hopkins.
162. *Eleocharis palustris* (L.) R. & S. Creeping Spike-rush. Wayne and Ashland Co. L. S. Hopkins.
165. *Eleocharis obtusa* (Willd.) Schultes. Blunt Spike-rush. Summit and Portage Co. L. S. Hopkins.
168. *Cyperus strigosus* L. Straw-colored Cyperus. Camp Muskingum, Carroll Co. Arthur R. Harper.
292. *Carex caroliniana* Schw. Carolina Sedge. Malvern, Carroll Co. Clyde H. Jones.
297. *Carex shortiana* Dew. Short's Sedge. Good Hope Twp., Hocking Co. Floyd Bartley.
323. *Carex lupulina* Muhl. Hop Sedge. Malvern, Carroll Co. Clyde H. Jones.
- 333.1. *Bromus latiglumis* (Shear). Hitch. Wayne Co. L. S. Hopkins.
334. *Bromus purgans* L. Hairy Brome-grass. Carroll Co. Ralph Kriebel.
338. *Festuca elatior* L. Tall Fescue-grass. Portage Co. L. S. Hopkins.
348. *Panicularia canadensis* (Mx.) Ktz. Rattlesnake Manna-grass. Portage Co. L. S. Hopkins.
350. *Panicularia nervata* (Willd.) Ktz. Nerved Manna-grass. Camp Muskingum, Carroll Co. Arthur R. Harper.
352. *Panicularia pallida* (Torr.) Ktz. Pale Manna-grass. Portage Co. L. S. Hopkins.
357. *Poa debilis* Torr. Weak Spear-grass. Portage Co. L. S. Hopkins.
370. *Eragrostis purshii* Schrad. Pursh's Love-grass. Wayne Co. James F. Machwart.
371. *Eragrostis pilosa* (L.) Beauv. Tufted Love-grass. Wayne Co. L. S. Hopkins.
386. *Trisetum pennsylvanicum* (L.) Beauv. Marsh False-oats. Good Hope Twp., Hocking Co. Floyd Bartley.
393. *Nothololcus lanatus* (L.) Nash. Velvet-grass. Camp Muskingum, Carroll Co. Arthur R. Harper and Ralph Kriebel.
421. *Muhlenbergia schreberi* Gmel. Spreading Muhlenbergia. Camp Muskingum, Carroll Co. Arthur R. Harper.
424. *Oryzopsis racemosa* (Sm.) Ricker. Black-fruited Mountain-rice. Geauga Co. L. S. Hopkins.
433. *Phalaris arundinacea* L. Reed Canary-grass. Camp Muskingum, Carroll Co. Arthur R. Harper.
439. *Agropyron repens* (L.) Beauv. Couch-grass. Gallia Co. E. Ray Bailey via C. J. Willard.
446. *Elymus canadensis* L. Nodding Wild-rye. Belpre Twp., Washington Co. Otis R. Kiracofe. Wayne and Highland Co. L. S. Hopkins.
464. *Panicum stipitatum* Nash. Long Panic-grass. Trumbull Co. L. S. Hopkins.
469. *Panicum miliaceum* L. Millet Panic-grass. Belmont Co. Emma E. Laughlin.
498. *Panicum boscii* Poir. Bosc's Panic-grass. Camp Muskingum, Carroll Co. Arthur R. Harper.
503. *Echinochloa crus-galli* (L.) Beauv. Common Barnyard-grass. Camp Muskingum, Carroll Co. Arthur R. Harper.
562. *Medeola virginiana* L. Indian Cucumber-root. Camp Muskingum, Carroll Co. Adele Konopka.
571. *Vagnera racemosa* (L.) Mor. Panicle False Solomon's-seal. Camp Muskingum, Carroll Co. Arthur R. Harper.
593. *Juncus effusus* L. Common Rush. Ashland Co. L. S. Hopkins.
600. *Juncus aristulatus* Mx. Small-headed Grass-leaf Rush. Wayne Co. L. S. Hopkins.
660. *Peramium pubescens* (Willd.) MacM. Downy Rattlesnake-plantain. Camp Muskingum, Carroll Co. Adele Konopka.
680. *Asimina triloba* (L.) Dunal. Papaw. Carroll Co. Harold S. Vasbinder.
714. *Hepatica triloba* Chaix. Round-lobed Liver-leaf. Camp Muskingum, Carroll Co. Adele Konopka.
728. *Thalictrum polygamum* Muhl. Tall Meadow-rue. Camp Muskingum, Carroll Co. Adele Konopka.
740. *Benzoin aestivale* (L.) Nees. Spicebush. Camp Muskingum, Carroll Co. Adele Konopka.
777. *Radicula palustris* (L.) Moench. Marsh Yellow-cress. Camp Muskingum, Carroll Co. Arthur R. Harper. Monroe Co. Clyde H. Jones.

857. *Oxalis stricta* L. Upright Wood-sorrel. Camp Muskingum, Carroll Co. Adele Konopka.
882. *Polygala viridescens* L. Purple Milkwort. Camp Muskingum, Carroll Co. Adele Konopka.
885. *Polygala ambigua* Nutt. Loose-spiked Milkwort. Camp Muskingum, Carroll Co. Arthur R. Harper.
931. *Hibiscus trionum* L. Bladder Ketmia. Carroll Co. Harold S. Vasbinder.
932. *Tilia americana* L. American Linden. Camp Muskingum, Carroll Co. Clyde H. Jones.
944. *Hypericum mutilum* L. Small-flowered St. John's-wort. Camp Muskingum, Carroll Co. Arthur R. Harper.
1003. *Alsine longifolia* (Muhl.) Britt. Longleaf Stitchwort. Camp Muskingum, Carroll Co. Adele Konopka.
1015. *Lychnis alba* Mill. White Lychnis. Camp Muskingum, Carroll Co. Adele Konopka.
1018. *Silene stellata* (L.) Ait.f. Starry Campion. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
1035. *Dianthus armeria* L. Deptford Pink. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
1040. *Portulaca oleracea* L. Purslane. Camp Muskingum, Carroll Co. Arthur R. Harper.
1044. *Allionia nyctaginea* Mx. Heart-leaf Umbrella-wort. Scioto Co. Conrad Roth.
1083. *Naumburgia thyrsoiflora* (L.) Duby. Tufted Yellow Loose-strife. Portage Co. L. S. Hopkins.
1104. *Tiniaria convolvulus* (L.) Webb. & Moq. Black Bindweed. Camp Muskingum, Carroll Co. Adele Konopka.
1108. *Tracaulon sagittatum* (L.) Small. Arrow-leaf Tear-thumb. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
1116. *Persicaria lapathifolia* (L.) S. F. Gr. Pale Persicaria. Camp Muskingum, Carroll Co. Adele Konopka.
1130. *Geum virginianum* L. Rough Avens. Camp Muskingum, Carroll Co. Arthur R. Harper.
1135. *Potentilla monspeliensis* L. Rough Cinquefoil. Camp Muskingum, Carroll Co. Arthur R. Harper.
1164. *Opulaster opulifolius* (L.) Ktz. Ninebark. Camp Muskingum, Carroll Co. Adele Konopka.
1166. *Spiraea tomentosa* L. Steeple-bush. Carroll Co. Clyde H. Jones.
1170. *Rosa setigera* Mx. Prairie Rose. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
1187. *Prunus nana* DuRoi. Choke Cherry. Camp Muskingum, Carroll Co. Arthur R. Harper.
1237. *Chamaecrista nictitans* (L.) Moench. Small-flowered Sensitive-pea. Tuscarawas Co. Earl Jones via C. J. Willard.
1300. *Vicia cracca* L. Cow Vetch. Camp Muskingum, Carroll Co. Adele Konopka.
- 1321.1. *Pueraris thunbergiana* (Sieb. & Zucc.) Benth. Kudzu. Introduced. Hamilton Co. Eleanor Knoechel.
1348. *Parsonsia petiolata* (L.) Rusby. Blue Waxweed. Camp Muskingum, Carroll Co. Harold S. Vasbinder.
- 1351.1. *Berchemia scandens* (Hill) Trelease. Rattan-vine. Cranberry Island, Buckeye Lake, Licking Co. L. E. Hicks via Floyd Bartley.
1355. *Rhamnus lanceolata* Pursh. Lance-leaf Buckthorn. Camp Muskingum, Carroll Co. Clyde H. Jones.
1362. *Vitis bicolor* LeC. Winter Grape. Camp Muskingum, Carroll Co. Arthur R. Harper.
1367. *Euonymus atropurpureus* Jacq. Wahoo. Good Hope Twp., Hocking Co. Richard T. Wareham and John N. Wolfe. Carroll Co. Harold S. Vasbinder.
1385. *Acer rubrum* L. Red Maple. Camp Muskingum, Carroll Co. Adele Konopka.
1395. *Hamamelis virginiana* L. Witch-hazel. Camp Muskingum, Carroll Co. Adele Konopka.
1417. *Fagus grandifolia* Ehrh. American Beech. Camp Muskingum, Carroll Co. Adele Konopka.
1422. *Quercus bicolor* Willd. Swamp White Oak. Camp Muskingum, Carroll Co. Clyde H. Jones.
1425. *Quercus macrocarpa* Mx. Bur Oak. Carroll Co. Harold S. Vasbinder.
1431. *Quercus coccinea* Wang. Scarlet Oak. Camp Muskingum, Carroll Co. Clyde H. Jones.
1432. *Quercus borealis* Michx. var. *maxima* (Marsh.) Ashe. Red Oak. Camp Muskingum, Carroll Co. Adele Konopka.
1435. *Ostrya virginiana* (Mill.) Willd. Hop-hornbeam. Camp Muskingum, Carroll Co. Adele Konopka.
1453. *Juglans cinerea* L. Butternut. Camp Muskingum, Carroll Co. Adele Konopka.
1461. *Populus deltoides* Marsh. Cottonwood. Camp Muskingum, Carroll Co. Clyde H. Jones.
1465. *Salix nigra* Marsh. Black Willow. Belpre Twp., Washington Co. Otis R. Kiracofe.

1472. *Salix interior* Row. Sandbar Willow. Belpre Twp., Washington Co. Otis R. Kiracofe.
 1535. *Aristolochia serpentaria* L. Virginia Snakeroot. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1551. *Pyrrola elliptica* Nutt. Shinleaf Wintergreen. Camp Muskingum, Carroll Co. Adele Konopka.
 1568. *Diospyros virginiana* L. Persimmon. Carroll Co. Harold S. Vasbinder.
 1580. *Phlox stolonifera* Sims. Creeping Phlox. Fairfield Co. John N. Wolfe.
 1606.1. *Heliotropium indicum* L. Indian Heliotrope. Introduced. Scioto Co. Conrad Roth.
 1621. *Sabbatia angularis* (L.) Pursh. Square-stemmed Sabbatia. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1637. *Apocynum medium* Greene. Intermediate Dogbane. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1638. *Apocynum cannabinum* L. Indian Hemp. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
 1646. *Asclepias incarnata* L. Swamp Milkweed. Camp Muskingum, Carroll Co. Adele Konopka.
 1653. *Asclepias quadrifolia* Jacq. Fourleaf Milkweed. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1682. *Verbascum blattaria* L. Moth Mullen. Camp Muskingum, Carroll Co. Adele Konopka.
 1698. *Mimulus alatus* Soland. Sharp-winged Monkey-flower. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1701. *Gratiola neglecta* Torr. Clammy Hedge-hyssop. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1717. *Veronicastrum virginicum* (L.) Farw. Culver's-root. Camp Muskingum, Carroll Co. Arthur R. Harper and Clyde H. Jones.
 1721. *Veronica americana* Schwein. American Speedwell. Camp Muskingum, Carroll Co. Arthur R. Harper and Clyde H. Jones.
 1738. *Linaria linaria* (L.) Karst. Yellow Toadflax. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1767. *Lappula virginiana* (L.) Greene. Virginia Stickseed. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1788. *Verbena hastata* L. Blue Vervain. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
 1798. *Teucrium canadense* L. American Germander. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1821. *Lycopus americanus* Muhl. Cutleaf Water-hoarhound. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1826. *Collinsonia canadensis* L. Stone-root. Camp Muskingum, Carroll Co. Harold S. Vasbinder.
 1829. *Koelia pilosa* (Nutt.) Britt. Hairy Mountain-mint. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
 1842. *Agastache nepetoides* (L.) Ktze. Catnip Giant-hyssop. Carroll Co. Harold S. Vasbinder.
 1846. *Glechoma hederacea* L. Ground-ivy. Camp Muskingum, Carroll Co. Adele Konopka.
 1867. *Monarda fistulosa* L. Wild Bergamot. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1868. *Monarda mollis* L. Canescent Wild Bergamot. Camp Muskingum, Carroll Co. Arthur R. Harper.
 1880. *Plantago aristata* Mx. Large-bracted Plantain. Malvern, Carroll Co. Arthur R. Harper.
 1899. *Daucus carota* L. Wild Carrot. Camp Muskingum, Carroll Co. Adele Konopka.
 1902. *Deringa canadensis* (L.) Ktze. Honewort. Camp Muskingum, Carroll Co. Clyde H. Jones.
 1936. *Cornus amomum* Mill. Silky Dogwood. Camp Muskingum, Carroll Co. Adele Konopka.
 1943. *Nyssa sylvatica* Marsh. Sour Gum or Tupelo. Camp Muskingum, Carroll Co. Adele Konopka.
 1952. *Mitchella repens* L. Partridge-berry. Camp Muskingum, Carroll Co. Adele Konopka.
 1964. *Galium asprellum* Mx. Rough Bedstraw. Camp Muskingum, Carroll Co. Arthur R. Harper.
 2009. *Campanula americana* L. Tall Bellflower. Camp Muskingum, Carroll Co. Arthur R. Harper and Clyde H. Jones.
 2014. *Specularia perfoliata* (L.) A.DC. Venus'-looking-glass. Camp Muskingum, Carroll Co. Adele Konopka.
 2019. *Lobelia inflata* L. Indian Tobacco. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.
 2072. *Bidens, laevis* (L.) B. S. P. Smooth Bur-marigold. Camp Muskingum, Carroll Co. Harold S. Vasbinder.
 2120. *Solidago bicolor* L. White Goldenrod. Carroll Co. Harold S. Vasbinder.

2132. *Solidago rugosa* Mill. Wrinkled-leaf Goldenrod. Good Hope Twp., Hocking Co. Richard T. Wareham and John N. Wolfe.
2137. *Solidago juncea* Ait. Plume Goldenrod. Camp Muskingum, Carroll Co. Arthur R. Harper and Harold S. Vasbinder.
2141. *Euthamia graminifolia* (L.) Nutt. Bushy Fragrant Goldenrod. Camp Muskingum, Carroll Co. Arthur R. Harper and Harold S. Vasbinder.
2145. *Sericocarpus asteroides* (L.) B. S. P. Toothed White-top Aster. Camp Muskingum, Carroll Co. Arthur R. Harper.
2158. *Aster puniceus* L. Purple-stem Aster. Carroll Co. Harold S. Vasbinder.
2163. *Aster prenanthoides* Muhl. Crooked-stem Aster. Carroll Co. Harold S. Vasbinder.
2170. *Aster multiflorus* Ait. Dense-flowered Aster. Good Hope Twp., Hocking Co. Richard T. Wareham and John N. Wolfe.
2176. *Aster ericoides* L. White Heath Aster. Carroll Co. Harold S. Vasbinder.
2194. *Eupatorium urticaefolium* Reich. White Snake-root. Camp Muskingum, Carroll Co. Arthur R. Harper and Harold S. Vasbinder.
2235. *Synosma suaveolens* (L.) Raf. Sweet-scented Indian-plantain. Athens Co. Walter P. Porter and P. S. Wamsley.
2237. *Mesadenia atriplicifolia* (L.) Raf. Pale Indian-plantain. Camp Muskingum, Carroll Co. Adele Konopka.
2250. *Cirsium odoratum* (Muhl.) Britt. Fragrant Thistle. Camp Muskingum, Carroll Co. Arthur R. Harper.
2252. *Cirsium arvense* (L.) Scop. Canada Thistle. Camp Muskingum, Carroll Co. Arthur R. Harper.
2262. *Chichorium intybus* L. Chicory. Camp Muskingum, Carroll Co. Adele Konopka.
2265. *Krigia virginica* (L.) Willd. Virginia Dwarf-dandelion. Nettle Lake, Williams Co. Floyd Bartley and Leslie Pontius.
2281. *Hieracium aurantiacum* L. Orange Hawkweed. Camp Muskingum, Carroll Co. Adele Konopka.
2282. *Hieracium pratensis* Tausch. Field Hawkweed. Camp Muskingum, Carroll Co. Adele Konopka.
2292. *Nabalus altissimus* (L.) Hook. Tall Rattlesnake-root. Carroll Co. Harold S. Vasbinder.
- 2295.1. *Iva ciliata* Willd. Rough Marsh Elder. Sells Lake, Athens Co. Walter P. Porter and P. S. Wamsley.
2299. *Sonchus asper* (L.) Hill. Spiny Sow-thistle. Camp Muskingum, Carroll Co. Arthur R. Harper and Adele Konopka.